REMARKS

Claims 1 – 36 are presently pending. In the above-identified Office Action, the Examiner objected to the Specification. Claims 1 – 4, 6 – 13, 17 – 19, 21 – 23, 25 – 27, 33 – 34, and 36 were rejected under 35 U.S.C. § 102(b) as being anticipated by Mills *et al.* ('479), hereinafter "Mills". Claims 5, 15, 16, 20 and 24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mills in view of Vencel *et al.* ('463). Claim 14 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Mills. Claims 33 – 35 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mills in view of admitted prior art. Claims 28 – 32 were allowed. Additional references were cited as being of interest.

The indication of allowable subject matter is gratefully acknowledged. By this Amendment, Applicant has cured the objection to the Specification and amended Claims 1, 22, 27, 33, and 36 to more clearly define the patentably distinct features of the subject invention. For the reasons set forth more fully below, the subject Application is submitted as properly defining an invention patentable over the prior art.

The invention disclosed and claimed in the subject application addresses the need in the art for a radar test system capable of simulating a radar return signal having a large number of targets, including endo-clutter targets (targets embedded in clutter), without excessive hardware. The inventive radar test system includes a processor adapted to digitally synthesize a digital composite radar return signal and a digital to analog converter adapted to convert the digital signal to an analog signal that can be applied to a radar system for testing.

The invention is set forth in claims of varying scope, of which Claim 1, as amended, is illustrative. Claim 1 now recites:

> 1. A system for generating a simulated radar return signal comprising:
>
> first means for receiving target and waveform parameters and in accordance therewith **digitally synthesizing a digital composite radar return signal** and
>
> second means for converting said digital signal to an analog signal. (Emphasis added.)

None of the references, taken alone or in combination, teach, disclose or suggest the invention as presently claimed. That is, none of the references teach, disclose or suggest a system having means for digitally synthesizing a digital composite radar return signal and means for converting the digital signal to an analog signal.

As mentioned above, in the Office Action, the Examiner relied heavily on Mills *et al.* Mills purports to teach a target generator that receives a radar signal, operates on the signal, and reemits an altered signal to simulate a target return. However, Mills does not teach receiving target and waveform parameters and in accordance therewith **digitally synthesizing a digital composite radar return signal**. The target generator described in Mills includes a processor for calculating a time delay based on target and waveform parameters for a single target (column 5, lines 59-66) and a "digital radio frequency memory" unit for digitally applying the time delay to a downconverted, analog RF signal (column 5, lines 51-56). The processor does not digitally synthesize samples of a composite radar return signal. Thus, the system disclosed by Mills cannot simulate multiple targets without additional hardware (i.e., additional digital radio frequency memory units for each target, RF hardware for providing the analog RF signal to each digital radio frequency memory unit, RF hardware for combining the outputs of each digital radio frequency memory unit, etc.). In contrast, the inventive system disclosed in the subject application teaches directly synthesizing samples of a composite radar return waveform, which can be accomplished using a single processor for as many targets as desired without any additional hardware.

Accordingly, Claims 1, 22, 27, 33, and 36 (as amended) and the claims dependent thereon should be allowable. Reconsideration, allowance and passage to issue are respectfully requested.

Respectfully submitted,
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